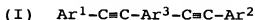


We claim:

1. An optical film comprising a transparent support and a polarizing layer which selectively transmits polarized light and which selectively reflects or scatters other polarized light, wherein the polarizing layer contains a compound represented by the following formula (I):



in which each of Ar^1 and Ar^2 independently is a monovalent aromatic group, and Ar^3 is a divalent aromatic group.

2. The optical film as defined in claim 1, wherein each of Ar^1 and Ar^2 independently is a monovalent aromatic hydrocarbon group, and Ar^3 is a divalent aromatic hydrocarbon group.

3. The optical film as defined in claim 1, wherein each of Ar^1 and Ar^2 independently is a monovalent aromatic hydrocarbon group, and Ar^3 is a divalent aromatic five-membered heterocyclic group, a divalent condensed aromatic five-membered heterocyclic group or a divalent aromatic group formed by connecting two or three groups thereof.

4. The optical film as defined in claim 1, wherein each of Ar^1 and Ar^2 independently is a monovalent aromatic hydrocarbon group, and Ar^3 is a divalent aromatic six-membered heterocyclic group, a divalent condensed aromatic six-membered heterocyclic group or a divalent aromatic group formed by connecting two or three groups thereof.

5. The optical film as defined in claim 1, wherein Ar¹ is a monovalent aromatic hydrocarbon group, a monovalent aromatic five-membered heterocyclic group or a monovalent condensed aromatic five-membered heterocyclic group, Ar² is a monovalent aromatic five-membered heterocyclic group or a monovalent aromatic hydrocarbon group, and Ar³ is a divalent aromatic hydrocarbon group, a divalent aromatic five-membered heterocyclic group, a divalent condensed aromatic five-membered heterocyclic group, a divalent aromatic six-membered heterocyclic group, a divalent condensed aromatic six-membered heterocyclic group or a divalent aromatic group formed by connecting two or three groups thereof.
6. The optical film as defined in claim 1, wherein each of Ar¹ and Ar² independently is a monovalent cyano-substituted aromatic group, and Ar³ is a divalent aromatic group.
7. The optical film as defined in claim 1, wherein Ar¹ is a monovalent aromatic group, Ar² is a monovalent aromatic six-membered heterocyclic group, and Ar³ is a divalent aromatic hydrocarbon group, a divalent aromatic five-membered heterocyclic group, a divalent condensed aromatic five-membered heterocyclic group, a divalent aromatic six-membered heterocyclic group, a divalent condensed aromatic six-membered heterocyclic group or a divalent aromatic group formed by connecting two or three groups thereof.

8. The optical film as defined in claim 1, wherein each of Ar¹ and Ar² independently is a monovalent aromatic group, Ar³ is a divalent aromatic group, and at least one of Ar¹, Ar² and Ar³ has a substituent group containing hydroxyl.

9. The optical film as defined in claim 1, wherein the polarizing layer consists of an optically isotropic phase and an optically anisotropic phase.

10. The optical film as defined in claim 9, wherein the optically anisotropic phase contains the compound represented by the formula (I).

11. The optical film as defined in claim 1, wherein the film has a polarizing plane perpendicular to a surface plane of the film, and wherein the film at the polarizing plane has the maximum transmittance for all rays of more than 75% and the minimum transmittances for all rays of less than 60%.

12. The optical film as defined in claim 9, wherein the film has the minimum difference between the refractive index of the optically isotropic phase and that of the optically anisotropic phase of less than 0.05 along a direction in a surface plane of the film.

13. The optical film as defined in claim 1, wherein the compound represented by the formula (I) has a polymerizable group.

14. The optical film as defined in claim 9, wherein the optically isotropic phase or the optically anisotropic phase is a discontinuous phase having a mean particle size of 0.01 to 1.0 μm .

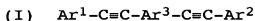
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15. The optical film as defined in claim 9, wherein the optically isotropic phase is a continuous phase while the optically anisotropic phase is a discontinuous phase.

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16. The optical film as defined in claim 1, wherein the polarizing layer is formed by stretching the film by ten times or less.

10 17. A polarizing plate comprising a polarizing element of light-scattering type and a polarizing element of light-absorbing type, said polarizing element of light-scattering type selectively transmitting polarized light and selectively reflecting or scattering other polarized
15 light, and said polarizing element of light-absorbing type selectively transmitting polarized light and selectively absorbing other polarized light, wherein the polarizing element of light-scattering type has a polarizing layer consisting of an optically isotropic phase and an optically
20 anisotropic phase, wherein the polarizing element of light-scattering type has a polarizing plane perpendicular to a surface plane of the polarizing element, the polarizing element of light-scattering type at the polarizing plane has the maximum transmittance for all rays of more than 75%
25 and the minimum transmittances for all rays of less than 60%, wherein an axis having the polarizing plane giving the maximum transmittance for all rays is essentially parallel to the transparent axis of the polarizing element of light-absorbing type, and wherein the optically anisotropic phase
30 contains a compound represented by the following formula (I):

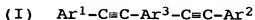


in which each of Ar^1 and Ar^2 independently is a monovalent aromatic group, and Ar^3 is a divalent aromatic group.

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18. A liquid crystal display which comprises a liquid crystal cell in which a liquid crystal compound is sealed between a pair of substrates having a transparent electrode and a pixel electrode, and also which comprises a pair of
5 polarizing plates sandwiching the liquid crystal cell, wherein the optical film defined in claim 1 is provided between a backlight and the polarizing plate on the backlight side of the cell.

19. A liquid crystal display comprising a backlight, a polarizing plate, a liquid crystal cell and another polarizing plate in this order, wherein the polarizing plate placed between the backlight and the liquid crystal cell
- 5 comprises a polarizing element of light-scattering type and a polarizing element of light-absorbing type, said polarizing element of light-scattering type selectively transmitting polarized light and selectively reflecting or scattering other polarized light, and said polarizing element of
- 10 light-absorbing type selectively transmitting polarized light and selectively absorbing other polarized light, wherein the polarizing element of light-scattering type has a polarizing layer consisting of an optically isotropic phase and an optically anisotropic phase, wherein the po-
- 15 larizing element of light-scattering type has a polarizing plane perpendicular to a surface plane of the polarizing element, the polarizing element of light-scattering type at the polarizing plane has the maximum transmittance for all rays of more than 75% and the minimum transmittances for
- 20 all rays of less than 60%, wherein an axis having the polarizing plane giving the maximum transmittance for all rays is essentially parallel to the transparent axis of the polarizing element of light-absorbing type, and wherein the optically anisotropic phase contains a compound represented
- 25 by the following formula (I):



in which each of Ar^1 and Ar^2 independently is a monovalent aromatic group, and Ar^3 is a divalent aromatic group.